

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended): A method of determining a cause of one or more medical symptoms exhibited by a subject, the method comprising:
 - (a) obtaining a biological sample from the subject;
 - (b) obtaining an array of different probes or different sets of probes, wherein each probe or set of probes selectively interacts with a target associated with a different known cause of the one or more medical symptoms, and wherein the array includes at least
 - (i) a first probe or set of first probes directed to a first target selected from the group comprising viruses, bacteria, and fungi; and
 - (ii) a second probe or set of second probes directed to a second target selected from the group comprising self-antigens, poisons, genetic disorders of the subject, therapeutic markers of the subject, and therapeutic markers of the target;
 - (c) applying the biological sample to the probes in the array under conditions that enable all of the probes to selectively interact with any targets in the biological sample;
 - (d) detecting interactions; and
 - (e) analyzing interactions to determine a cause of the one or more medical symptoms.
2. (Original): The method of claim 1, wherein the array of probes or sets of probes is arranged on a planar substrate.
3. (Original): The method of claim 1, wherein each target is a nucleic acid, peptide, polypeptide, protein, antibody, antigen, small organic molecule, inorganic molecule, enzyme, or polysaccharide.

4. (Original): The method of claim 1, wherein the array of probes comprises nucleic acid probes and polypeptide probes.

5. (Original): The method of claim 1, wherein all of the probes in the array are polypeptides.

6. (Original): The method of claim 5, wherein the probes are antibodies, antigens, enzymes, zinc-finger binding proteins, minor-groove binders, transcriptional factors, combinations thereof, or chimeras thereof.

7. (Original): The method of claim 1, wherein the subject is a plant or animal.

8. (Original): The method of claim 1, wherein the subject is a human.

9. (Original): The method of claim 1, wherein the subject is deceased.

10. (Currently amended): The method of claim 1, wherein the ~~cause is~~ array includes four or more different probes or sets of probes, wherein each probe or set of probes is directed to a different target selected from the group comprising fungi, bacteria, viruses, and poisons a fungal, bacterial, viral, chemical, or genetic cause.

11. (Original): The method of claim 1, wherein the biological sample is a blood, cerebrospinal fluid, cell culture, urine, sweat, buccal swab, tissue biopsy, or aspiration sample.

12. (Original): The method of claim 2, wherein the probes are attached to the substrate using covalent or non-covalent bonds.

13. (Original): The method of claim 2, wherein the probes are attached to the substrate using amide or thiol bonds.

14. (Original): The method of claim 1, wherein the probes are expressed on the surface of genetically modified cells.

15. (Original): The method of claim 1, wherein a probe selectively interacts with a target by specifically binding to the target to form a complex.

16. (Original): The method of claim 1, wherein a first probe selectively interacts with a target associated with an infectious disease caused by a bacteria, virus, or fungus, and a second, different probe selectively interacts with a target associated with a genetic cause.

17. (Original): The method of claim 1, wherein the array of probes comprises probes that assay for the absence of a causative agent of one or more medical symptoms.

18. (Currently amended): A method of determining the susceptibility of a subject to a known cause of one or more medical symptoms, the method comprising:

- (a) obtaining a biological sample from the subject;
- (b) obtaining an array of different probes or different sets of probes, wherein each probe or set of probes selectively interacts with a genetic marker ~~target~~ associated with the susceptibility of the subject to a different known cause of the one or more medical symptoms;
- (c) applying the biological sample to the probes in the array under conditions that enable all of the probes to selectively interact with any targets in the biological sample;
- (d) detecting interactions; and
- (e) analyzing interactions to determine the susceptibility of the subject to a cause of the one or more medical symptoms.

19. (Cancelled).

20. (Original): A method of claim 1, wherein all of the probes selectively interact with their respective targets under the same conditions.

21. (Currently amended): A method of determining a cause of one or more medical symptoms in a subject and assessing the suitability of one or more therapeutic agents to treat the cause of the symptoms, the method comprising:

- (a) obtaining a biological sample from the subject;
- (b) obtaining an array of different probes or different sets of probes, wherein a first probe or set of probes selectively interacts with a first target associated with a known cause of the one or more medical symptoms, wherein the first target is selected from the group comprising self-antigens, poisons, genetic disorders of the subject, and wherein a second, different probe selectively interacts with a second target associated with a therapeutic optimization factor;
- (c) applying the biological sample to the probes in the array under conditions that enable all of the probes to selectively interact with any targets in the biological sample;
- (d) detecting interactions; and
- (e) analyzing interactions to determine a cause of the one or more medical symptoms and to determine the suitability of a therapeutic agent to treat a cause of the one or more symptoms.

22. (Original): The method of claim 21, wherein the therapeutic optimization factor is tolerance, intolerance, or susceptibility of the subject or a causative agent to a specific drug.

23. (Currently amended): The method of claim 21, wherein the second target associated with the therapeutic optimization factor is a gene in a pathogen that causes susceptibility, resistance, or an idiosyncratic reaction of the pathogen when exposed to a therapeutic agent.

24 to 34. (Cancelled).

35. (New): A kit comprising different probes or different sets of probes, wherein each probe or set of probes selectively interacts with a target associated with a different known cause of the one or more medical symptoms, and wherein the kit includes two or more different probes or sets of probes directed to two or more different types of targets selected from the group comprising viruses, bacteria, fungi, self-antigens, poisons, genetic diseases of the subject, and therapeutic markers of the subject.

36. (New): The kit of claim 35, wherein the kit includes five or more different probes or probe sets directed to five or more different types of targets.

37. (New): The kit of claim 35, wherein the one or more medical symptoms comprise lower respiratory tract symptoms.

38. (New): The kit of claim 35, wherein the one or more medical symptoms comprise recurrent infections.

39. (New): The kit of claim 35, wherein the one or more medical symptoms comprise symptoms of sore throat.

40. (New): The method of claim 1, wherein the array includes five or more different probes or sets of probes directed to five or more different types of targets selected from the group comprising viruses, bacteria, fungi, self-antigens, poisons, genetic disorders of the subject, and therapeutic markers of the subject.

41. (New): The method of claim 1, wherein the array of probes comprises nucleic acid probes.